

## **METHOD FOR FORMING NITRIDE READ ONLY MEMORY WITH INDIUM POCKET REGION**

5

### **ABSTRACT OF THE INVENTION**

First of all, a P-type semiconductor substrate is provided. Then an oxide-nitride-oxide layer is formed on the P-type semiconductor substrate. Afterward, a photoresister layer is formed on the oxide-nitride-oxide layer, and it is defined to form a plurality of photoresister regions on the oxide-nitride-oxide layers. The oxide-nitride-oxide layer is then etched to form a plurality of nitride read only memory cells. Subsequently, perform a pocketed implantation with indium ions to form a plurality of pocket dopant regions under a plurality of nitride read only memory cells, respectively. Next, perform a N-type ion-implanting process to form a plurality of ion-implanting regions in the P-type semiconductor substrate between a plurality of nitride read only memory cells. Finally, a plurality photoresister regions are removed to form an nitride read only memory.